

CLIMATOLOGICAL DATA FOR MARCH, 1913.

DISTRICT NO. 9, COLORADO VALLEY.

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GENERAL SUMMARY.

The storms of March in the Colorado Valley were not severe. One, however, proved to be important in that it crossed the Continental Divide, deepening meanwhile, and, together with the secondary depressions that formed in its wake, continued eastward, causing great loss of life and damage to property by winds and flood in the Great Central Valleys. Several days were taken up in the development of this storm in the Southwest, but after it had assumed definite form its progress eastward was rapid. Central in Nevada on the morning of Saturday, the 22d, 12 hours later it had reached eastern Utah, Sunday morning, central Colorado, and by Sunday night the low center overlay eastern Nebraska and Western Iowa. Secondary depressions formed in the eastern part of the Colorado Basin immediately after the passage of the primary storm, but owing to advancing high pressure over the northern half of the plains region their progress eastward was slow and well to the south, thus prolonging the period of heavy rainfall in the central valley.

The month was cold, and over much of the central and southern parts of the Colorado Basin it was the coldest March in 10 or 12 years. In localities in southwestern Colorado and western New Mexico the minimum temperatures of the month were the lowest of record for March. Heavy frost in the central and southeastern parts of Arizona during the last decade damaged truck gardens, apricots, and some of the early varieties of peaches and plums. The precipitation was local in character, and, although it occurred somewhere in the district every day but one, the total for the different drainage areas, except the San Juan, fell short of the average for March. In general there was an excess of sunshine.

TEMPERATURE.

The mean temperature for the stations reporting was 39.7° , or 4.2° below the normal. The mean for March, 1912, was 41.5° . The highest monthly mean was 61.2° at Sentinel and Yuma, Ariz., and the lowest, 9.8° , at Corona, Colo. The first two days were much colder than the normal, especially in the southern half of the district. From the 4th to 10th mean temperatures were generally somewhat above the normal. A severe and general cold spell set in on the 12th, and, except for a day or two here and there, lasted till the 28th; on the 25th and 26th the average deficiency of temperature was 17° . The last two days were considerably warmer than the normal and the highest temperatures for the month occurred generally on those days. Readings of 80° or higher were noted on those dates at the majority of the stations in Arizona, about half of the stations in western New Mexico, and at several in eastern Utah. There was less uniformity in the occurrence of the lowest tempera-

ture at the different stations; they occurred principally on the 1st, 15th, 25th, and 26th. Zero temperature or lower occurred in the different areas, except southeastern Nevada. The highest temperature, 95° , occurred at Parker, Ariz., on the 30th and 31st, and the lowest -25° , at Pagosa Springs, Colo., on the 1st.

Details of temperature are summarized in the following table:

Areas of States in dis-trict No. 9.	Temperature.					
	Mean.	Depart-ure from normal.	Highest.	Station.	Low-est.	Station.
Western Wyoming . . .	25.3	-3.0	65	Green River . . .	-21	Daniel . . .
Western Colorado . . .	29.0	-4.4	78	Palisades . . .	-25	Pagosa Springs . . .
Eastern Utah . . .	35.6	-4.5	87	St. George . . .	-16	Scofield . . .
Western New Mexico . . .	38.2	-5.2	86	Pratt . . .	-19	Dulce . . .
Arizona . . .	49.2	-4.0	95	Parker . . .	-17	Lakeside . . .
Southeastern Nevada . . .	52.0	+2.5	91	Logan . . .	25	Logan . . .

PRECIPITATION.

The average for the 204 stations reporting was 0.55 inch, or 0.38 inch below the normal. The average for March, 1912, was 2.91 inches. Precipitation was almost general on the 12th and 13th, 24th and 25th, and it occurred at many stations in western Colorado, western Wyoming, and eastern Utah from the 19th to the 23d. At only 2 stations was the 24-hour fall as much as 1.00 inch. The greatest monthly amount was 6.59 inches at Corona, Colo., while none occurred at 4 stations in eastern Utah, 3 in western New Mexico, and 12 in Arizona. Monthly snowfalls of 10 inches or more occurred at 1 station in western Wyoming, 24 in western Colorado, 5 in western New Mexico, and 4 in Arizona. The greatest monthly fall, 43.6 inches, occurred at Gladstone, Colo. The average number of days with 0.01 inch or more precipitation was 4 in western Wyoming, 7 in western Colorado, 3 in eastern Utah, 4 in western New Mexico, 2 in Arizona, and 1 in southeastern Nevada. For the district as a whole the average was 3 days.

The average precipitation and departures from the normal on the different watersheds are given in the following table:

WATERSHED.

Green.	Grand.	San Juan.	Little Colorado.	Gila.	Mimbres.	Colorado proper.
Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.
0.45	-0.55	0.91	-0.65	1.34	+0.31	0.86
-				-0.50	0.29	-0.67
				0.39	-0.38	0.29
						-0.76

MISCELLANEOUS.

The average amount of sunshine, in percentages, with departures from the normal, was as follows: Grand Junction, 72, +8; Durango, 69, -1; Phoenix, 88, +10; and Yuma, 93, +8.

The relative humidity reported was: Grand Junction, 50; Durango, 60; Phoenix, 45; and Yuma, 37 per cent.

SNOWFALL IN THE MOUNTAINS.

Western Wyoming.—The snowfall was considerably less than average, but it is well packed. There is the normal amount of snow at high altitudes; at lower elevations it is less than usual, but there will be sufficient water for irrigation purposes.

Western Colorado.—Except in the basin of the San Juan, the snowfall of the month was less than the normal. High temperatures during the closing days caused practically all snow to disappear from southern exposures of moderate elevation. At the end of March the average depth on the Grand watershed, average elevation 8,600 feet, was 29 inches, or 14 inches less than at the close of March a year ago; for the Gunnison, average elevation 8,800 feet, the average depth was 32 inches, or 4 inches less than at the same date last year; for the White and Yampa, average elevation 8,000 feet, the average depth

was 24 inches, or 16 inches less than reported at the corresponding date last year; while the average depth reported on the San Juan, average elevation 7,800 feet, was 15 inches, or 3 inches less than that reported at the corresponding date last year.

Eastern Utah.—The snowfall during March was less than the normal. While the depth at the end of the month was less than a year ago and less than the average, the run-off will be nearly normal.

Western New Mexico.—The favorable conditions that set in during February continued during March on the San Juan watershed and in the Northwest, especially over the Zuni Mountains. A good early supply of water is indicated. On the drainage of the San Francisco, Gila, and Mimbres conditions also continued favorable. Heavy snow fell over the higher mountains, and cold weather has held melting in check.

Arizona.—Although the snowfall of the month was inconsiderable, the steady cold prevented rapid melting, and the depths at the end of the month were much above the average. The snow is deeply drifted in canyons and gulches and on the shady side of high mountains, and is hard packed and frozen. The run-off was not enough to cause more than slight stages in any of the principal streams. Water for irrigation and other purposes promises to be abundant for the coming season.

